

Conservation and the Social Sciences

As forests shrink, fisheries collapse, and species—the charismatic and the unknown—wink out around the globe, the conservation community continues to look to the biological sciences to inform policy and practice. Biology, of course, provides us with the theoretical and analytic tools to identify rare and threatened species and ecosystems. Biology also enables us to estimate the limits to human use necessary to sustain these systems. Our failure to understand these basic (though often extraordinarily complex) issues sometimes leads to conservation policies and practices ill-suited to addressing the problems they were intended to solve. More often, however, we get the biology right, but our conservation interventions still fail to sustain target species and ecosystems.

The disconnect between our biological knowledge and conservation success has led to a growing sense among scientists and practitioners that social factors are often the primary determinants of success or failure. Although it may seem counterintuitive that the foremost influences on the success of *environmental* policy could be *social*, conservation interventions are the product of *human* decision-making processes and require changes in *human* behavior to succeed. Thus, conservation policies and practices are inherently social phenomena, as are the intended and unintended changes in human behavior they induce.

Recognizing that conservation is about people as much as it is about species or ecosystems—an acknowledgment seldom explicitly made in conservation circles—suggests a significant shift in the nature and use of science in conservation. To preserve the earth's natural heritage, the social sciences must become central to conservation science and practice. Political science, anthropology, economics, psychology, sociology, geography, legal studies, and other social science disciplines all have analytic tools and established knowledge that can explain and predict patterns of human behavior—insights vital to the success of local, national, and international conservation efforts.

In the development and management of protected areas, for example, the social sciences can complement the biological sciences in critical ways. Environmental economics can often provide a powerful rationale for the establishment of protected areas by demonstrating that the value of goods and services generated by intact ecosystems exceeds that of a fragmented or transformed landscape. Anthropological research can document the sociocultural and spiritual value of biodiversity. Together with other social science disciplines, anthropology can also identify the conservation-oriented cultural beliefs, values, norms, and rules that are often well

suited to serve as the foundation for the formal laws and regulations that govern protected areas. Finally, drawing upon the rich literature on the governance of “commons”—forests, fisheries, wildlife and the like—the social sciences can provide valuable insights into how decision-making arrangements, resource use rights, monitoring and enforcement systems, and conflict resolution mechanisms shape individual use of, and thus the state of, protected areas.

Protected areas are not unique. Across the full range of issues that face the conservation community today, the social sciences can contribute greatly to the development and implementation of lasting solutions by answering critical questions. Which policy initiatives most effectively curb the illegal bushmeat trade? How should public awareness programs be designed to reflect learning differences across age groups? In what markets are ecolabeling programs best suited to create the economic incentives for sustainable fisheries? What cultural beliefs and values drive the international trade in endangered species for medicinal purposes? How will long-term conservation planning and protection in Africa be affected by the demographic impacts of HIV/AIDS? The list could go on for pages.

The real question for debate, of course, is not *whether* to integrate the social sciences into conservation but *how* to do so. As a starting point for discussion, we offer a few suggestions to the Society for Conservation Biology (SCB), conservation organizations, and the academic community.

The Society for Conservation Biology

The SCB should highlight the vital importance of the social sciences to conservation through concrete action. First, the SCB should build upon the success of its 2002 annual meeting by making the conference theme, “People and Conservation,” a core component of its annual meeting program, no different from conservation genetics or spatial ecology. Second, just as the SCB signaled its commitment to become a more international professional society by creating continent-specific organizational sections, it should establish a social science section to signal the importance of the social sciences to the global conservation community and provide a focal point for development of the field. Finally, the SCB should explore the possibility of hosting its annual meeting in conjunction with a social scientific professional society (e.g., American Anthropological Association, International Association for the Study of Common Property) to promote cross-disciplinary communication,

learning, and collaboration, and to emphasize the importance of the social sciences to conservation.

Conservation Organizations

Governmental and nongovernmental conservation organizations should take additional steps to integrate social scientific information into conservation decision-making. Many, if not most, conservation organizations have already made stakeholder participation a core component of their work; several have established small research programs that examine various aspects of the “human dimension” of conservation. True mainstreaming of the social sciences in conservation, however, will require visionary leadership and a dramatic shift in organizational behavior that far exceed these efforts. Conservation organizations should consider undertaking three obvious, yet symbolically and substantively significant, actions to catalyze the necessary organizational change:

- Hire social scientists for leadership positions and provide them with the mandate to build social science into organizational decision-making.
- Enlist social scientists to develop and manage “rapid social assessment” programs, which would provide decision-makers with a rough sketch of critical social information at potential conservation sites through short-term but intensive inquiry.
- Document and share success stories that illustrate the value of social scientific information to “on the ground” conservation results. Such success stories not only foster organizational learning, internal support, and conservation success, but also justify donor and organizational investment in the social sciences.

Ultimately, if the social sciences were truly mainstreamed in conservation, the presence of an anthropologist or a political scientist on a project team would be as commonplace and unremarkable as that of a botanist or an ornithologist.

The Academic Community

As conservation organizations create greater opportunities for conservation-savvy social scientists, the academic community will increasingly need to provide social scientists with conservation-relevant knowledge and skills. Professional degree programs in environmental management should train students to realize that social context is critical to conservation success and to understand why this is so. Traditional social science programs, on the other hand, should demonstrate that conservation-relevant social science is legitimate, worthy of pursuit, and capable of answering questions of profound theoretical significance. To accomplish these goals, university faculty and administrators will need to think past epistemic traditions and prejudices to explore creative new ways to provide students with both rigorous social-

scientific training and conservation-relevant knowledge. In particular, the academic community should

- Develop cross-departmental initiatives, ranging from interdisciplinary team-taught courses to certificate programs to degree programs.
- Design programs to provide students with experience as conservation practitioners (e.g., through internships or apprenticeships) and thereby inform their academic inquiry.
- Reach out to biologically trained conservation practitioners, creating opportunities for these individuals to gain an appreciation for the social sciences through “short courses” and other mechanisms.

Successful models for such initiatives exist, but it is incumbent upon the academic community to make these innovative programs the rule, not the exception.

Mainstreaming the social sciences in conservation policy and practice will be difficult, but the stakes are too high and the rewards too great for the conservation community to fail to try. Biodiversity conservation is a human endeavor: initiated by humans, designed by humans, and intended to modify human behavior to achieve a socially desired objective—conservation of species, habitats, and ecosystems. Embracing this fact, and recognizing its implications for the nature and use of science in conservation, represents a challenge for academics and practitioners alike. We must all be willing to leave our comfort zone behind, to speak different languages, work in different circles, and accept different beliefs. Communication, collaboration, learning, and mutual respect represent the path to success. Failure is an option we cannot afford.

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